

**Amendments to the Specification:**

Please replace paragraphs [0004] and [0005] with the following amended paragraphs:

[0004] Furthermore, in recent years there are card shaped media of the type having IC chips or antennae embedded therein such as IC cards, which are being used in a variety of fields. Because of the embedding of such elements into the card, the surface of the card becomes uneven resulting in problems in transferring images.

[0005] Japanese Patent Publication (KOKAI) No. H8-332742 teaches the technology of an indirect transfer method printing apparatus that transfers an image to an intermediate transfer medium once, then transfers that image again to the recording medium, as a method for overcoming the aforementioned problems. According to this method, it is possible to overcome the problems such as the limitation of recording medium related to the receptive layer or the transferring of images to an uneven surface of the recording medium which had been considered demerits of the direct transfer method. Furthermore, this method has the advantage of being easier to ~~printing~~ print to the entire surface of the card shaped recording medium compared to the direct transfer method.

Please replace a paragraph [0007] with the following amended paragraph:

[0007] However, running costs for the intermediate transfer method are higher than the direct transfer method because an intermediate transfer medium must be used. Printing also takes longer. Furthermore, depending on the design of the card, even if the entire front surface is required for printing, often times the back side only is used to print precautions for card use, thus there are fewer cases requiring printing over the entire surface, so there are merits and demerits for both methods of printing. Furthermore, according to the technology disclosed in Japanese Patent Publication (KOKAI) No. H8-58125, a plurality of thermal heads and ink films are disposed so the printing apparatus becomes very large in size thereby increasing associated costs. Still further, in the event that a coating film is used to protect the

ink transferred to the back side of the recording paper in the transferred layer using the aforementioned different thermal head, or to prevent falsification, a separate apparatus such as an over-coating apparatus would be required, thereby increasing the overall size of the apparatus and its associated costs.

Please replace a paragraph [0013] with the following amended paragraph:

[0013] The aforementioned first printing means and the aforementioned second printing means are composed of the same printing elements. A platen is opposingly arranged to the aforementioned printing elements ~~that supports~~ for supporting the aforementioned recording medium when forming images thereto by the aforementioned first printing means and ~~that supports~~ for supporting the aforementioned intermediate transfer medium when forming images thereto by the aforementioned second printing means.

Please replace paragraphs [0016]-[0018] with the following amended paragraphs:

[0016] Still further comprised are a recording medium transport means for transporting the aforementioned recording medium, a recording medium transport drive means for driving the aforementioned recording medium transport means, an intermediate transfer medium transport means for transporting the aforementioned intermediate transfer medium and an intermediate transfer medium transport drive means for driving the aforementioned intermediate transfer medium transport means, wherein the aforementioned recording medium transport drive means and the aforementioned intermediate transfer medium transport drive means are driven so that the transport direction of the aforementioned recording medium when forming images thereto by the aforementioned first printing means and the transport direction of the aforementioned intermediate transfer medium when forming images thereto by the aforementioned second printing means are the same.

[0017] Still further comprised are a recording medium transport means for transporting the aforementioned recording medium, a

recording medium transport drive means for driving the aforementioned recording medium transport means, an intermediate transfer medium transport means for transporting the aforementioned intermediate transfer medium and an intermediate transfer medium transport drive means for driving the aforementioned intermediate transfer medium transport means, wherein the aforementioned recording medium transport drive means and the aforementioned intermediate transfer medium transport drive means are driven so that the transport speed of the aforementioned recording medium when forming images thereto by the aforementioned first printing means and the transport speed of the aforementioned intermediate transfer medium when forming images thereto by the aforementioned second printing means are the different. At this time, it is preferable that the transport speed of the intermediate transfer medium by the aforementioned intermediate transfer medium transport means is higher than the transport speed of the recording medium by the aforementioned recording medium transport means.

**[0018]** Still further comprised are the first thermal transfer sheet comprising a plurality of colored inks that apply to the aforementioned first printing means, and the second thermal transfer sheet comprising a plurality of colored inks that apply to the aforementioned second printing means, wherein the aforementioned first and the aforementioned second thermal transfer sheets are composed of the same sheet. The aforementioned first and second thermal transfer sheets ~~is~~ are arranged with the layer region of a plurality of inks and either a layer region of a single adhesive or a protective layer region in order.

Please replace a paragraph **[0025]** with the following amended paragraph:

**[0025]** Further equipped is the first drive means that rotatingly drives the aforementioned take-up spool shaft, wherein this first drive means rotatingly drives the aforementioned first supply spool and/or the aforementioned second supply spool. At this time, it is preferred that the aforementioned first drive means is a reversible rotating drive motor.

Please replace a paragraph [0028] with the following amended paragraph:

**[0028]** FIG. 1 is a side view showing the general configuration of the printing apparatus according to the embodiment of the present invention;

FIGS. 2A and 2B are side views showing the linked state of second turning portion and first turning portion in the printing apparatus according to the present invention, wherein FIG. 2A shows the vertical status of card reception, and FIG. 2B shows the vertical status after synchronized inversion;

FIG. 3 is a side view near the image forming portion when employing direct printing or hologram processing using the printing apparatus according to the embodiment of the present invention;

FIG. 4 is a side view of the printing apparatus according to the embodiment to perform direct printing and indirect printing;

FIG. 5 is a side view showing the card transport mechanism near the intermediate transfer sheet transport mechanism and image forming portion of the printing apparatus according to an embodiment of the present invention;

FIG. 6 is a side view of the printing apparatus according to the embodiment to perform hologram processing;

FIGS. 7A to 7C are explanatory drawings of the thermal transfer sheet and intermediate transfer sheet, wherein FIG. 7A and FIG. 7C are front views showing a model of the thermal transfer sheet, and FIG. 7B is a sectional view showing a model of the intermediate transfer sheet; and

FIG. 8 is a side view showing the general configuration of another embodiment of the printing apparatus applying the present invention.

Please replace a paragraph [0032] with the following amended paragraph:

**[0032]** The card supply portion 3 comprises the card stacker to store stacks of a plurality of the blank ~~card~~ cards C. The stacker side plate 32 that comprises an opening slot to allow only one of

card C to pass therethrough is arranged in the position facing the third card transport path P on the card stacker. To the bottom of the card stacker is pressingly arranged the kick roller 31 that rotatingly feeds the bottommost blank card C of a plurality of the blank ~~card~~ cards C stored in a stack in the card stacker to the third card transport path P3.

Please replace the paragraph [0040] with the following amended paragraph:

[0040] As shown in FIGS. 7A to 7C, the thermal transfer sheet R is affixed with the inks of Y (yellow), M (magenta), C (cyan) and Bk (black) in order on the film having widths slightly larger than the length of the card C in the length direction, and comprises a protective layer region T to protect the card C surface formed thereupon by images, after the Bk (black) and in repeated bands in order along the surface. As shown in FIGS. 7A to 7C, the thermal transfer sheet R is affixed with the inks of Y (yellow), M (magenta), C (cyan) and Bk (black) in order on the film having widths slightly larger than the length of the card C in the length direction. It is acceptable to arrange an adhesive layer Hs in order repeatedly after the Bk (black) region to adhere the image to the surface of the card C, but the adhesive layer Hs is particularly applicable for cards having a ~~materials-thereto~~ material difficult to ~~deposit~~ receive inks, such as a polycarbonate type card. Note that the adhesive layer Hs is arranged after the Bk (black) ink region, in FIG. 7C, but it is also perfectly acceptable to configure that adhesive layer after C (cyan) which is before Bk (black), or in other words between each C (cyan) and Bk (black) ink layer region.

Please replace a paragraph [0044] with the following amended paragraph:

[0044] As shown in FIG. 1 and FIG. 4, when forming an image on the card C using the direct transfer method, the intermediate transfer sheet F is fed to around the platen roller 21. As shown in FIG. 7B, the intermediate transfer sheet F is formed of the base

film Fa, the back surface coating layer Fb formed on the back side of the base film Fa, the receptive layer Fe to receive ink, the overcoat layer Fd to protect the receptive layer Fe surface, and the peeling surface Fc to promote the peeling of the overcoat layer Fd and the receptive layer Fe thermally joined, from the base film Fa, wherein the back surface coating layer Fb, the base film Fa, the peeling surface Fc, the overcoat layer Fd and the receptive layer Fe are formed in order in layers from the bottom. The intermediate transfer sheet F is trained with the receptive layer Fe opposing the thermal transfer sheet R and the back coating layer Fb side touching the platen roller 21. Note that to the image forming portion 9, the light emitting element S1 and the light receiving element S2 for detecting the mark for positioning of the intermediate transfer sheet F are arranged separated from but perpendicular to the intermediate transfer sheet F between the platen roller 21 and guide roller 91. This can be seen in FIG. 3 and FIG. 4.

Please replace a paragraph [0049] with the following amended paragraph:

[0049] As can be seen in FIG. 5, within the region of the frame 2, the first card transport path P1 and the second card transport path P2 shown in FIG. 1, the drive mechanism that gets its driving force from the reversible pulse ~~motor~~ motors M1 and M2 as the source of drive movement, is arranged. The timing pulley 61 (hereinafter referred to as simply the pulley) is mated to the motor shaft on the pulse motor M1 and an endless timing belt 62 (hereinafter referred to as simply the belt) is trained between the pulley and the pulley 63. To the pulley 63 is mated the pulley 64 having a diameter smaller than the pulley 63.

Please replace paragraphs [0053]-[0055] with the following amended paragraphs:

[0053] In the counterclockwise direction, the drive from the gear 96 is transmitted and in the clockwise direction meshes with the one-way gear 97 mated to the shaft that is the pulley (freely



rotates). To the shaft on the one-way gear 97, the gear 98 and pulley 99 are mated, and the gear 98 meshes in the clockwise direction with the one-way gear 101 that is a pulley and locked in the counterclockwise direction. To the pulley 99 the belt 102 is trained therebetween with the pulley 103. To the gear 103 shaft, the gear 104 is mated, and the gear 104 meshes with the gear 105. To the gear 105 shaft is mated the torque limiter transmitting rotational drive force to the gear 107 via the torque limiter 106. To the same shaft as the gear 107 is mated the clock plate 108. The gear 107 meshes with the gear 109 that is mated to the take-up spool shaft 110 to take up the intermediate transfer sheet F. Near the clock plate 108 is disposed the unitized transmissive sensor S8 to detect the amount of rotation of the take-up spool shaft 110, via the rotation of the clock plate 108, and to detect the take-up of the intermediate transfer sheet F by detecting the rotation of the take-up spool shaft 110.

**[0054]** Also, the gear 96 meshes with the one-way gear 111 mated to the shaft that is the pulley in the counterclockwise direction, the drive from the gear 96 being transmitted in the clockwise direction. To the shaft on the one-way gear 111, the gear 112 and pulley 113 are mated, and the gear 112 meshes in the clockwise direction with the one-way gear 114 that is the pulley and locked in the counterclockwise direction. To the pulley 113 the belt 115 is trained therebetween the pulley 116 and the pulley 125. Note that to maintain a constant tension on the belt 115, the tension roller 126 is disposed between the pulley 116 and the pulley 125 which are connected by the belt 115. To the gear 116 shaft, the gear 117 is mated, and the gear 117 meshes with the gear 118. To the gear 118 shaft is mated the torque limiter transmitting rotational drive force to the gear 123 via the torque limiter 119. To the same shaft as the gear 123 is mated the clock plate 121. The gear 123 meshes with the gear 124 that is mated to the supply spool shaft 120 to supply the intermediate transfer sheet F. Near the clock plate 121 is disposed the unitized transmissive sensor S9 to detect the amount of rotation of the supply spool shaft 120, via the rotation of the clock plate 121, thereby detecting the feed of

the intermediate transfer sheet F. Note that the intermediate transfer sheet supply portion 16 or the hologram sheet supply portion 29 is mounted to the supply spool shaft 120, the sheet take-up portion 17 or the hologram sheet supply portion 29 being mounted to the take-up spool shaft 110.

**[0055]** On the other hand, the drive from the pulley 113 is transmitted also to the pulley 125, via the belt 115. To the gear 125 shaft, the gear 127 is mated, and the gear 127 meshes with the gear 128. Still further, the drive is transmitted to the gear 130 via the gear 129 disposed on the same shaft as the gear 128. To the pulley 130 shaft is mated the solenoid clutch 131. The solenoid clutch 131 interlocks the rotational drive force of the gear 130 to the gear 133 via the gear 132 which is mated to the solenoid clutch 131 shaft only when taking up (Rv) the intermediate transfer sheet F to form images on the intermediate transfer sheet F by the thermal head 20. To the gear 133 shaft is mated the torque limiter 134 therethrough transmitting rotational drive force to the transport roller 58 to transport the intermediate transfer sheet F. Note that the speed of transporting of the intermediate transfer sheet F by the supply spool shaft 120, the platen roller 21 and the transport roller 58 when the aforementioned solenoid clutch 131 drive is interlocked, is set so that the speed of the supply spool shaft 120 is greater than the transport roller 58 which is greater than the platen roller 21. Regarding torque control, it is set so that the platen roller 21 is greater than the transport roller 58 which is greater than the supply spool shaft 120.

Please replace a paragraph **[0058]** with the following amended paragraph:

**[0058]** As can be seen in FIG. 1, formed on the line extended to the direction of arrow L on the second card transport path P2 in the frame 2 is the discharge roller 27 to discharge the card C whose printing has been completed, to outside of the frame 2. Below the discharge outlet 27 is removably mounted from the frame 2 the stacker for stocking a stack of the card C. Note that between



the horizontal transport portion 12 and the discharge roller 27 is arranged the unitized transmissive sensor, not shown in the drawings. Furthermore, the eject outlet 28 is formed to eject the card C which has been determined to have had erroneous writing of data at the information recording portion 8 or the card C where errors ~~where~~ were generated at the image forming portion 9 or the transfer portion 10, by rotating the second turning portion 5 to an oblique direction which is an intermediate position between the arrow D and the arrow R shown in FIG. 1 and to eject the aforementioned defective card C in the downward direction of the aforementioned oblique direction. To the eject outlet 28, it is also perfectly acceptable to mount a defective card receptacle to temporarily hold such defective cards.

Please replace paragraphs [0066]-[0068] with the following amended paragraphs:

[0066] When processing using the hologram is possible, the card supply portion 3 is arranged on the third card transport path P3, the cleaner 4 and the second turning portion 5 are operated. This transports the blank card C on the card supply portion 3 in the direction of arrow L in FIG. 1. In other words, by rotating the kick roller 31 on the card supply portion 3, the lowermost blank card C on the card stacker is sent to the third card transport path P3. Both sides of the blank card C are cleaned by the cleaning roller 34 on the cleaner 4. The leading edge of the blank card C is detected by the unitized transmissive sensor, not shown in the drawings, arranged between the second turning portion 5 and the cleaner 4 which stops the rotation of the kick roller 31 on the card supply portion 3. The blank card C is stopped after being sent for a determined number of pulses ~~after being sent~~, from the aforementioned unitized sensor to the second turning portion 5 and the second turning portion 5 in a horizontal state nips the blank card C. (See FIG. 1)

[0067] Continuing on, recording information is sent to the information recording portion 8 and the blank card C is received between the second turning portion 5 and the information recording

portion 8. The information recording portion 8 starts the rotational drive of the plurality of transport rollers in the direction to transport in the blank card C according to the instructions from the CPU. The CPU stops the rotation of the pinch rollers 38 and 39 on the second turning portion 5 that sent the card C to the information recording portion 8, according to the signals from the unitized transmissive sensor, not shown in the drawings, arranged between the second turning portion 5 and the information recording portion 8. The information recording portion 8 writes to the blank card C magnetic data and/or IC data using according to the recording information sent from the control portion 19. The CPU receives the information to verify whether the writing was successful or not from the information recording portion 8 and rotatingly drives the pinch rollers 38 and 39 on the second turning portion 5 in the direction of card C reception and issues the card C discharge instruction to the information recording portion 8. The CPU stops the rotation of the pinch rollers 38 and 39 on the second turning portion 5 according to the signals from the unitized transmissive sensor, not shown in the drawings, arranged between the second turning portion 5 and the information recording portion 8. The blank card C is stopped after being sent for a determined number of pulses ~~after being sent~~, from the aforementioned unitized sensor to the second turning portion 5 and the second turning portion 5 in a horizontal state nips the blank card C. (See FIG. 1) When a writing error has occurred for the verify information received from the information recording portion 8, the second turning portion 5 rotates to an oblique direction which is the intermediate position between the arrows D and R in FIG. 1. The pinch rollers 38 and 39 rotatingly ~~drives~~ drive the erroneous card C toward the eject outlet 28 disposed downward in the aforementioned oblique direction.

**[0068]** When the verify information from the information recording portion 8 was written correctly (in other words, when there are no writing errors), the CPU rotates the second turning portion 5 90° (along with the first turning portion 6). (See FIG. 2A.) Continuing on, the pinch rollers 38 and 39 on the second

turning portion 5 are rotatably driven to send the card C in the direction of the arrow U in FIG. 1 and the pinch rollers 38 and 39 on the first turning portion 6 are rotatably driven in the same way. This receives the card C between the second turning portion 5 and the first turning portion 6. (The state is shown in FIG. 2A.) The CPU stops the rotation of the pinch rollers 38 and 39 on the first turning portion 6 and the second turning portion 5 after the card C is detected by the unitized transmissive sensor, not shown in the drawings, arranged between the second turning portion 5 and the information recording portion 1 after sending the card for a determined number of pulses. While the card C is nipped in the first turning portion 6 (as shown in FIG. 3), the CPU starts the rotational drive of the pulse motor M1 to the motor driver of the pulse motor M1 while interlocking the solenoid clutch 67. This starts the rotational drive of the platen roller 21, the capstan roller 74 and the capstan roller 78.

Please replace a paragraph [0070] with the following amended paragraph:

**[0070]** The pinch rollers 38 and 39 on the first turning portion 6 stop rotating at the point where the unitized transmissive sensor, not shown in the drawings, arranged between the first turning portion 6 and the image forming portion 9, detects the trailing edge of the card C. The card C, inserted into the image forming portion 9, is transported in the direction of the arrow U, shown in FIG. 3, by the first turning portion 6, capstan roller 78 and the pinch roller 79 over the first card transport path P1. The CPU transports the card C in the direction of the arrow U for the number of pulses to the printing starting position, after the unitized sensor arranged between the capstan roller 78 and the thermal head 20 detects the leading edge of the card C, to transport the card C to the printing position, then starts the rotation of the thermal head sliding cam 23. At this point, the back surface of the card C is supported by the platen roller 21 by the rotating action of the thermal head sliding cam 23 toward the direction of the arrow A in FIG. 3. The front surface of the card

C is pressed against the thermal head 20 interposed therebetween by the thermal transfer sheet R.

Please replace a paragraph [0072] with the following amended paragraph:

[0072] The CPU rotates the thermal head sliding cam 23 further in the direction opposite to the arrow A in FIG. 3 when the forming of the image by the Y (yellow) portion is completed and the thermal head 20 is retracted from the card. The pulse motor M1 starts reverse drive after the thermal head 20 is retracted. This reverse rotates the platen roller 21, the capstan roller 74, the pinch roller 75, the capstan roller 78 and the pinch roller 79 and the card C is transported in the direction of the arrow D in FIG. 3. The CPU stops the reverse rotational drive of the pulse motor M1 after the leading edge of the card C passes the unitized transmissive sensor, not shown in the drawings, arranged between the capstan roller 78 and the thermal head 20, and the card C has been transported for a determined number of pulses. The CPU forward drives the pulse motor M1 to print the next die M (magenta). After the leading edge of the card C is detected by the unitized transmissive sensor, not shown in the drawings, arranged between the capstan roller 78 and the thermal head 20, the CPU transports the card C in the direction of the arrow U for a determined number of pulses to the print starting position. During that time, the CPU feeds a minute amount of the thermal transfer sheet R until the leading edge of the next color M (magenta) is positioned at the print starting position Sr. Then, by rotating the thermal head sliding cam 23 further in the direction of the arrow A, the thermal head 20 is pressed against the card C, therebetween interposed by the thermal transfer sheet R. The thermal head 20 forms the image of M (magenta) overlaying the previous color of Y (yellow) on the card C. The CPU[[,]] repeats the aforementioned processes in order to overlap images in the YMC inks on the surface of the card C.

Please replace a paragraph [0074] with the following amended

paragraph:

**[0074]** Next, the CPU inverts both the first turning portion 6 and the second turning portion 5 (180° rotation). The card C, through this inversion is then inverted front to back with regard to the first card transport path P1. The CPU forms images on the back side of the card C using the aforementioned method. Note that printing to the back side of the card C often uses the one color of Bk (black). In such cases, images are formed using only Bk (black) according to the same method described above, and image forming using YMC ~~are~~ is not performed. The CPU inverts both the first turning portion 6 and the second turning portion 5 (90° rotation) while the card C is nipped and the pinch rollers 38 and 39 on the first turning portion 6 are stopped after the image forming process on the back side of the card C is completed. (See FIG. 6.) This positions the card C on the second card transport path P2. Processing using the hologram can now be started.

Please replace paragraphs **[0079]-[0082]** with the following amended paragraphs:

**[0079]** Firstly, the CPU, in the same way as direct printing to both surfaces of the card C, determines the existence of the intermediate transfer sheet F using the detection signals of light emitting sensors S2 and S6 and the detection signals of the sensors S8 and S9. If it is determined that it does not exist, the CPU displays a message to change the intermediate transfer sheet F on the touch panel and waits until the opening and closing door is opened and closed once. If it is positively determined that the intermediate transfer sheet F exists, after image forming to the card C back surface using the direct transfer method as described above, the first turning portion 6 is rotated 90° (see the state shown in FIG. 4) along with the second turning portion 5 while the pinch rollers 38 and 39 on the first turning portion 6 are stopped with the card C nipped therebetween. Note that when forming images using both the direct transfer method and the indirect transfer method, the intermediate transfer sheet F is trained to the platen roller 21 and back-tension roller 88. The pulse motor M1 and the



pulse motor M2 are rotatably driven so that the direction of transport of the card C when forming images to the back side of the card C and the direction of transport of the intermediate transfer sheet F when forming images to the intermediate transfer sheet F are the same, but the transport speed of the intermediate transfer sheet F at the printing position Sr is greater than the transport speed of the card C. This is the same for the thermal transfer sheet R comprising an ink layer for forming images. The paired take-up rollers 57 and thermal transfer sheet take-up portion 15 are rotatably driven so that the transport speed of the thermal transfer sheet R by the paired take-up rollers 57 and thermal transfer sheet take-up portion 15 that drives with the rotational drive of the paired take-up rollers 57 to take up the thermal transfer sheet R as the thermal transfer sheet R transport means is higher when forming images to the intermediate transfer sheet F ~~that~~ than when forming images to the card C. In this way, so that the transport speed of the thermal transfer sheet R differs, the rotating speed of the take-up spool shaft thereto mounted is the spool on the take-up side that rolls up the thermal transfer sheet R with the paired take-up rollers 57 is rotated differently to be greater when forming images on the intermediate transfer sheet F than when forming images to the card C. Note that as the drive source for the paired take-up rollers 57 and the take-up spool shaft a DC motor, not shown in the drawings in the present embodiment, is employed.

**[0080]** Next, the CPU heats the thermal transfer sheet R ink with the thermal head 20 and forms an image on the reception layer Fe on the intermediate transfer sheet F. When forming an image, the pulse motor M1 is rotated to rotate the platen roller 21 in the counterclockwise direction while the pulse motor M2 is rotated to take-up the intermediate transfer sheet F on the intermediate transfer sheet supply portion 16 and in synchronization to that, the thermal transfer sheet R is taken up on the thermal transfer sheet take-up portion 15. In other words, it recognizes a mark for positioning established on the intermediate transfer sheet F by monitoring the light emitting sensor S2. It monitors the rotating



amount of the clock plate 90 connected to the back-tension roller 88 that always rotates forward and reverse as one unit to feed or back up the intermediate transfer sheet F to transport the intermediate transfer sheet F for a determined distance to the image print starting position. The thermal head 20 is positioned away from the platen roller 21 and as described above, the thermal transfer sheet R is fed for a determined distance to the printing position Sr, for example to the starting edge of Y (yellow). The CPU rotates the thermal head sliding cam 23 further in the direction opposite to the arrow A in FIG. 4 when the starting edge of the Y (yellow) portion has reached the printing position Sr and touches the thermal head 20 to the platen roller 21 with the thermal transfer sheet R interposed therebetween. Simultaneously, the pulse motor M1 and the pulse motor M2 back up to rotate in the (Rv) direction. This forms the image using the color Y (yellow) on the intermediate transfer sheet F.

**[0081]** The CPU rotates the thermal head sliding cam 23 when the forming of the image on the Y (yellow) portion is completed to the intermediate transfer sheet F, to retract the thermal head 20 from the platen roller 21. By rotating the pulse motor M1 and the pulse motor M2 in the feeding direction (Fw), the take-up spool shaft 110 rotates in the counterclockwise direction and takes up the intermediate transfer sheet F until the positioning mark established thereupon passes the light emitting sensor S2. Next, in the same way as for the Y (yellow) portion, it recognizes a mark for positioning established on the intermediate transfer sheet F by monitoring the light emitting sensor S2. It monitors the rotating amount of the clock plate 90 connected to the back-tension roller 88 that always rotates forward and reverse as one unit to feed or back up the intermediate transfer sheet F to transport the intermediate transfer sheet F for a determined distance to the image print starting position. The thermal transfer sheet R is fed minutely until the leading edge of the M (magenta) portion reaches the printing position Sr. In the same manner as was used for the Y (yellow) portion, the thermal head sliding cam 23 rotates again to touch the thermal head 20 to form an image of the M

(magenta) portion onto the Y (yellow) portion on the receptive layer FE on the thermal transfer sheet R. The CPU repeats the above described processes in order to form images in layers using the YMC inks on the intermediate transfer sheet F, and then retracts the thermal head 20 from the platen roller 21.

Please replace a paragraph [0085] with the following amended paragraph:

[0085] The CPU stops the rotational drive to the feeding direction of the pulse motor M1 and the pulse motor M2 when the transfer of the intermediate transfer sheet F to the front surface of the card C is completed according to the dimensions of the card C and re-rotates the heat roller elevator cam 51 to retract the heat roller 45 from the platen roller 50. The card C is discharged to the stacker 13 passing the horizontal transport portion 12 by way of the discharge outlet 27.

Please replace the paragraphs [0090]-[0091] with the following amended paragraphs:

[0090] Furthermore, in the printing apparatus 1, the thermal head control unit in the control portion 19 controls for more thermal energy to be applied to the thermal transfer sheet R by the thermal head 20 when forming an image on the card C than ~~to~~ that to be applied to the thermal transfer sheet R by the thermal head 20 when forming an image on the intermediate transfer sheet F. The control unit 19 actuator control unit increases the transport speed of the intermediate transfer sheet F when forming images thereto with the drive mechanism illustrated in FIG. 5 so that it has a faster transport speed than the transport speed of the thermal transfer sheet R when forming an image to the card C by the thermal head 20, so it is possible to attain high quality images without a decrease in the printing performance, regardless of the differences in characteristics of the card C and the intermediate transfer sheet F such as their thermal capacity.

[0091] In the printing apparatus 1, the pulse motor M1 and pulse motor M2 are rotatably driven so that the direction of transport

of the card C when forming an image to the back side thereof and the direction of transport of the intermediate transfer sheet F when forming an image thereto are the same so the capstan rollers 74 and 78 that ~~transports~~ transport the card C near the image forming portion 9 can be compactly arranged near the platen roller 50 further enabling a more compact image forming portion 9.

Please replace the paragraphs [0097]-[0098] with the following amended paragraphs:

**[0097]** Furthermore, according to this embodiment of the invention, the first turning portion 6 and the second turning portion 5 are synchronized (interlocked) to rotate or invert, but these turning portions can also be independently rotated or inverted. Still further, according to this embodiment of the present invention, the rotating frame 40 and the pinch rollers 38 and 39 are independently driven. However, to prevent any offset of the card, it is perfectly acceptable to rotate the pinch rollers 38 and 39 in reverse for the same amount of angle as the rotating frame 40.

**[0098]** Again, according to this embodiment of the present invention, the first card transport path P1 is formed substantially vertically where the image forming portion 9 is arranged, and the second card transport path P2 is formed substantially horizontally where the transfer portion 10 is arranged, but it is also conceivable to form the first card transport path P1 substantially horizontally and the second card transport path P2 substantially vertically. In such a situation, the arrangement of the first turning portion 6 and the second turning portion 5 can be slightly altered so that the image forming portion 9 and transfer portion 10 are separated by at 90° angles so the printing apparatus is able to attain the same effect as the present embodiment.